



4-50.1 Quality Management Program for Plants and Mixtures

The department has moved away from methods specifications and process inspection to a contractor-provided quality control concept for the production of asphaltic mixtures. The providing of a quality control program (QC) by the contractor and the responsibility to provide quality assurance (QA) by the department, for asphaltic mixtures is covered by [standard spec 460](#).

Quality Management Program (QMP) requirements are incidental to HMA pavement items, as provided in [standard spec 460](#). There are three sub-conditions in [standard spec 460](#) relative to testing requirements:

- If the contract contains 5,000 tons or more of asphaltic mixture all the testing requirements apply.
- If the contract contains less than 5,000 tons of asphaltic mixture the quality control testing may be conducted in an off-site laboratory and field tensile strength ratio tests are not required.
- If the contract contains less than 500 ton of asphaltic mixture or if the mixture is to be used for temporary pavements and will be removed before completion of the contract, all testing may be waived by the project manager.

4-50.1.1 Contractor Responsibility

The contractor is responsible for all activities, including mix design, control of materials, process control inspection, sampling, testing, and necessary adjustments in the process related to the production of a hot mix asphaltic mixture that meets the requirements of the specifications.

The contractor should have a documented plan that provides an outline of how the quality control responsibilities will be provided for. A suggested list of items to be included in the quality control plan is included in [CMM 8-30](#).

4-50.1.2 WisDOT Responsibility

The department is responsible for providing quality assurance by conducting assurance testing, observing sampling and testing performed by the contractor, monitoring required control charts prepared by the contractor, and by doing quality assurance testing on additional samples.

4-50.1.3 When QMP Does Not Apply

According to [standard spec 460.2.8.2.3.1.4](#) the engineer may waive testing for temporary pavements. The QMP testing requirements in [standard spec 460](#) are not applicable to asphalt surfacing items defined in [standard spec 465](#), or to asphaltic base course and asphaltic base course widening items defined in [standard spec 315](#). The contractor is responsible for providing a mix design for these items and controlling the production process to provide a mix that meets the specifications.

4-50.2 Environmental Regulations

[Standard spec 107.18](#) states that the contractor must comply with laws and regulations controlling environmental pollution. In the production of asphaltic mixtures, the conditions most apt to occur, which would be in violation of air quality standards, involve blue smoke and dust.

Blue smoke results from overheating asphalt, either in its uncombined form or as salvaged asphaltic pavement, to a high temperature sufficient to release unburned hydrocarbons. It is identified by a blue plume from the smokestack. When a violation is observed, the project manager will inform the contractor and request steps be taken to correct the problem. Remedial action might involve reducing heating temperatures, covering salvaged or reclaimed asphaltic pavement piles to reduce moisture or reducing the percentage of salvaged or reclaimed asphaltic pavement in the mixture.

Black smoke from the plant usually comes from incomplete burning of fuel oil used to fire the drier or heat the drum mixer. It can be corrected by adjusting the burner flame to burn cleanly.

Most dust observed around asphalt mixing plants is produced by the process of heating and drying the aggregate. However, dust can be produced wherever it is conveyed through the plant before mixing. If a dust cloud is observed around the plant, the project manager will inform the contractor and request steps be taken to correct the problem. All plants should be equipped and operated with dust collectors to minimize the dispersion of dust and meet the limits on particle emissions prescribed in the Wisconsin Administrative Code, Rules of the DNR. Collected dust can be reintroduced into the mix in calculated amounts or wasted in a settling basin. Dust caused by hauling equipment can be settled by application of water or calcium chloride.

The Department of Natural Resources (DNR) is responsible for enforcing air quality regulations, and their

personnel may be on the project from time to time to observe the plant operations for compliance to standards. Project staff is expected to be courteous and to comply with reasonable requests by DNR to have the contractor comply with air quality standards.

4-50.3 Salvaged or Reclaimed Asphaltic Material

Salvaged asphaltic pavement material is defined as recovered material from existing asphaltic pavement located within the project. Reclaimed asphaltic pavement material (RAP) is defined as recovered material from existing asphaltic pavement located outside the project.

HMA Pavement, Type ____ may include a specified percentage of salvaged asphaltic pavement. If the contract does not specify including salvaged asphaltic pavement in the mix, the contractor may optionally incorporate RAP. In either case the asphaltic material in the salvaged/reclaimed asphaltic pavement is calculated and paid for separately. The reclaimed asphaltic pavement mixture incorporated in the mix is not paid for separately.

If salvaged asphaltic pavement is a contract item, the salvaged asphaltic pavement is measured and paid for separately. [Standard spec 460.2.5](#) states that salvaged asphaltic pavement not incorporated into the work and not otherwise specified in the contract provisions becomes the property of the contractor. Such excess salvaged asphaltic pavement may be used as RAP on future contracts.

[Standard spec 104.8](#) allows the contractor to use, on the project, aggregates and other material found in roadway excavations. This does include existing asphaltic pavements not specified in the contract to be used in pavements or base.

[Standard spec 204.3.2](#) states that removed asphaltic surface becomes the property of the contractor. Thus existing asphaltic pavement material from the item Removing Asphaltic Surface could also be used as RAP by the contractor.

The method of calculating the pay quantity of asphaltic material obtained from either salvaged or reclaimed asphaltic pavement is set forth in [standard spec 455.4.1](#).